## **CLAIMS**

Please ADD claims 38 and 39 as set forth herein.

A listing of the claims (including status identifiers) is provided below.

Claims 1-18 (Canceled)

19. (previously presented) A magnetron coating system, comprising:

a first coating source;

an auxiliary substrate arranged between the first coating source and an area into which a substrate to be coated is to be received;

a magnetron having a cathode composed of the auxiliary substrate; and a device structured and arranged to determine an area density of the auxiliary substrate.

- 20. (previously presented) The magnetron coating system according to claim 19, wherein the auxiliary substrate is formed as a cylinder, and the magnetron comprises a rod cathode magnetron.
- 21. (previously presented) The magnetron coating system according to claim 19, wherein the first coating source comprises a planar magnetron.
- 22. (previously presented) The magnetron coating system according to claim 19, wherein the first coating source comprises a shield.
- 23. (previously presented) The magnetron coating system according to claim 19, wherein the device comprises a detection device structured and arranged to determine x-ray fluorescence.

- 24. (previously presented) The magnetron coating system according to claim 19, further comprising additional auxiliary substrates, wherein the magnetron comprises additional cathodes composed of the additional auxiliary substrates.
- 25. (previously presented) A method for depositing thin layers, comprising:

  depositing a layer on an auxiliary substrate via a first coating source;

  coating a substrate via a magnetron having a cathode composed of the auxiliary substrate;

  and

determining an area density of the auxiliary substrate.

- 26. (previously presented) The method of claim 25, wherein a thickness of the layer deposited on the auxiliary substrate is less than 100 nm.
- 27. (previously presented) The method of claim 26, wherein the thickness of the layer deposited on the auxiliary substrate is less than 10 nm.
- 28. (previously presented) The method of claim 25, wherein the layer deposited on the auxiliary substrate comprises a metal layer.
- 29. (previously presented) The method of claim 28, wherein the metal layer comprises an element having a higher mass number than an average mass number of a material of the auxiliary substrate.

- 30. (previously presented) The method of claim 25, further comprising: operating the first coating source as an other magnetron with inert gas; and operating the magnetron with at least one of the inert gas and reactive gas.
- 31. (previously presented) The method of claim 30, wherein at least one of the following:

the inert gas comprises argon, and the reactive gas comprises at least one of nitrogen, oxygen, and methane.

- 32. (previously presented) The method of claim 25, wherein the area density of the auxiliary substrate is determined after the coating of the substrate.
- 33. (previously presented) The method of claim 25, wherein the determining of the area density of the auxiliary substrate comprises x-ray fluorescence.
- 34. (previously presented) The method of claim 25, further comprising operating the magnetron with DC voltage or pulsed DC voltage.
- 35. (previously presented) The method of claim 25, wherein the cathode comprises several cathodes and the method further comprises operating the magnetron with the several cathodes with a frequency of approximately 10 kHz to approximately 100 kHz.

- 36. (previously presented) The method of claim 25, wherein the coating of the substrate comprises depositing an other layer on the substrate.
- 37. (previously presented) The method of claim 36, wherein the other layer comprises titanium dioxide.
  - 38. (new) The method of claim 25, further comprising:

determining a deposition rate in a plasma area between the first coating source and the auxiliary substrate, and

after the determining the area density of the auxiliary substrate, determining an area density of the substrate from a mass balance of the auxiliary substrate.

39. (new) The magnetron coating system according to claim 19, wherein:

the device determines the area density of the auxiliary substrate at a location behind a plasma area between the auxiliary substrate and the substrate to be coated with respect to a direction of rotation of the auxiliary substrate,

the location is before a plasma area between the first coating source and the auxiliary substrate with respect to the direction of rotation of the auxiliary substrate, and

the device comprises an x-ray source that irradiates the auxiliary substrate at the location and a photodetector that determines x-ray radiation reflected from the auxiliary substrate.